



DOCKET # 1358

Please DATE and RETURN acknowledging receipt of:

In re Application: Chiu et al.

Serial No.: 07/525,943 Filed: 5-17-90

For: Bulking Agents and Processes For  
Preparing Them From Food Starch

Enclosed are:

Petition Under 1.181 and Letter  
Authorizing Fee Payment

NATIONAL STARCH AND CHEMICAL COMPANY - PATENT DEPARTMENT

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RECEIVED  
SEP 24 1991

DEPUTY ASST. COMM.

NATIONAL STARCH AND CHEMICAL COMPANY - PATENT DEPARTMENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of	:	
Chiu, et al.	:	
Serial No. 07/525,943	:	Group Art Unit: 132
Filed: May 17, 1990	:	Examiner: J. Golian
For: BULKING AGENTS AND PROCESSES FOR	:	
PREPARING THEM FROM FOOD GUMS	:	

PETITION PURSUANT TO 37 C.F.R. SECTION 1.181

Office of the Deputy Assistant Commissioner  
for Patents  
Commissioner of Patents and Trademarks  
Washington, D. C. 20231

Attn: Petition Information  
Crystal Park Two, Suite 913

SIR:

Applicants' petition is made pursuant to 37 C.F.R. Section 1.181(a)(1) and seeks relief from the refusal of Examiner Golian to enter an amendment correcting the originally named inventors pursuant to 37 C.F.R. Section 1.48(a).

Statement of Facts

As indicated on the filing receipt issued in the above-captioned patent application (Exhibit A annexed hereto), the application of Chiu, et al., originally recited the names of three inventors and contained 26 claims.

In a restriction requirement mailed on November 19, 1990, Examiner Golian required restriction of prosecution to either Group I (Claims 1-11 and 19-26), or Group II (Claims 12-18). In a response filed December 3, 1990, Applicants elected the claims of Group I (Claims 1-11 and 19-26), with traverse, for examination. Applicants did not cancel Claims 12-18.

On December 26, 1990, Examiner Golian issued a first Office Action indicating that Claims 1-26 "are pending in the application" and that Claims 9, 10 and 12-18 "are withdrawn from consideration". A copy of the first page of Examiner Golian's Office Action is annexed hereto as Exhibit C.

On April 17, 1991, Applicants filed an amendment and petition to correct the originally named inventors by adding a previously unnamed person, Roger Jeffcoat, as an inventor of Claims 12-18. A copy of the papers filed by Applicants to correct inventorship is annexed hereto as Exhibit B.

On May 30, 1991, Applicants submitted an amendment canceling Claims 12-18 from the application in response to Examiner Golian's restriction requirement. A copy of Applicants' amendment is annexed hereto as Exhibit D.

On September 4, 1991, Examiner Golian issued a second Office Action, stating, inter alia:

The change of inventorship adding Roger Jeffcoat has not been approved. The declaration states that the contribution of the inventor sought to be added is directed to Claims 12-18. No such claims or comparable claims are at present in this application.

See page 2 of Examiner's Office Action, a copy of which is annexed hereto as Exhibit E.

Remarks in Support of Applicants' Petition

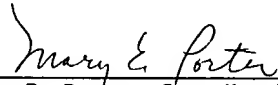
Examiner Golian's refusal to enter an amendment to the inventorship of Claims 12-18 is based on the fact that Claims 12-18 were not present in the case at the time that he issued the Office Action. However, Claims 12-18 were pending at all times herein until canceled by Applicants' amendment of May 30, 1991. As noted above in the Statement of Facts, Applicants' petition to amend inventorship was filed on April 17, 1991 (see Exhibit B).

Examiner Golian has stated no other reason for refusal to amend inventorship herein. Thus, Applicants believe they are entitled to entry of this amendment so as to correct the inventorship of Claims 12-18. Furthermore, Applicants will be disadvantaged by failure to enter this amendment because foreign patent applications have been filed that claim priority in the U.S. application and identify Roger Jeffcoat as an inventor of the U.S. application.

CONCLUSION

For the reasons set forth above, Applicants respectfully request the Commissioner to direct Examiner Golian to enter Applicants' amendment to correct inventorship by adding Roger Jeffcoat as an inventor of Claims 12-18.

Respectfully submitted,

  
Mary E. Porter, Reg. No. 33,440  
Attorney for Applicants  
Tel. No. 908-685-5129

National Starch and Chemical Company  
P. O. Box 6500  
Bridgewater, New Jersey 08807

September 19, 1991

I HEREBY CERTIFY THAT THIS DOCUMENT IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE AS FIRST CLASS MAIL IN AN ENVELOPE ADDRESSED TO: COMMISSIONER OF PATENTS AND TRADEMARKS, WASHINGTON, D. C. 20231, ON <u>September 20, 1991</u> BY <u>Mary E. Porter</u>
--

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of	:	
Chiu, et al.	:	
Serial No. 07/525,943	:	Group Art Unit: 132
Filed: May /7, 1990	:	Examiner: J. Golian
For: BULKING AGENTS AND PROCESSES FOR	:	
PREPARING THEM FROM FOOD GUMS	:	

LETTER

Office of the Deputy Assistant Commissioner  
for Patents  
Commissioner of Patents and Trademarks  
Washington, D. C. 20231

Attn: Petition Information  
Crystal Park Two, Suite 913

SIR:

Enclosed please find a Petition pursuant to 37 C.F.R. Section 1.181 requesting that the Examiner in the above-captioned patent application be directed to enter an amendment correcting inventorship.

The requisite fee for a Petition Pursuant to 37 C.F.R. Section 1.181, \$120.00, should be charged to Deposit Account No. 14-0455. A duplicate copy of this letter is enclosed for this purpose.

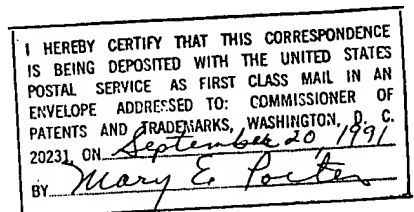
Very truly yours,

*Mary E. Porter*

Mary E. Porter, Reg. No. 33,440  
Attorney for Applicants  
Tel. No. 908-685-5129

National Starch and Chemical Company  
P. O. Box 6500  
Bridgewater, New Jersey 08807

September 19, 1991





RECEIVED  
APR 11 2007  
TC 1700

**EXHIBIT A**

FILING RECEIPT



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTORNEY DOCKET NO.	DRWGS	TOT CL	IND CL
07/525,943	05/17/90	132	\$ 514.00	1358	0	26	5

EDWIN M. SZALA  
NATIONAL STARCH AND CHEMICAL CO.  
BOX 6500  
BRIDGEWATER, NJ 08807

Receipt is acknowledged of the patent application identified herein. It will be considered in its order and you will be notified as to the examination thereof. Be sure to give the U.S. SERIAL NUMBER, DATE OF FILING, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this transmittal.

Applicant(s)

CHUNG-WAI CHIU, WESTFIELD, NJ; MATTHEW J. HENLEY,  
SOMERSET, NJ; JAMES P. ZALLIE, HILLSBOROUGH, NJ.

FOREIGN FILING LICENSE GRANTED 06/02/90

TITLE

BULKING AGENTS AND PROCESSES FOR PREPARING THEM FROM FOOD GUMS

PRELIMINARY CLASS: 426

**EXHIBIT B**

**EXHIBIT C**

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UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
07/525,943	05/17/90	CHIU	1358

GOLIAN, EXAMINER

EDWIN M. SZALA  
NATIONAL STARCH AND CHEMICAL CO.  
BOX 6500  
BRIDGEWATER, NJ 08807

ART UNIT 132  
PAPER NUMBER

DATE MAILED: 12/26/90

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS.

☒ This application has been examined ☒ Responsive to communication filed on 12/3/90 ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), 0 days from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- |   |   |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice re Patent Drawing, PTO-948.                  |
| 3. <input checked="" type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449.      | 4. <input type="checkbox"/> Notice of Informal Patent Application, Form PTO-152 |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474.     | 6. <input type="checkbox"/>   |

Part II SUMMARY OF ACTION

1. ☒ Claims 1-26 are pending in the application.  
Of the above, claims 9, 10, 12-18 are withdrawn from consideration.
2. ☐ Claims have been cancelled.
3. ☐ Claims are allowed.
4. ☒ Claims 1-8, 11, 19-26 are rejected.
5. ☐ Claims are objected to.
6. ☐ Claims are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-948).
10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed has been ☐ approved; ☐ disapproved (see explanation).
12. ☐ Acknowledgement is made of the claim for priority under U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. ; filed on
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

EXAMINER'S ACTION

## EXHIBIT D

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of	:	
Chiu, et al.	:	
Serial No. 07/525,943	:	Group Art Unit: 132
Filed: May 17, 1990	:	Examiner: Joseph Golian
For: BULKING AGENTS AND PROCESSES FOR	:	
PREPARING THEM FROM FOOD GUMS	:	

AMENDMENT UNDER 37 C.F.R. 1.115

Commissioner of Patents and Trademarks  
Washington, D. C. 20231

SIR:

This amendment is in response to a first office action mailed on December 26, 1990. The Examiner withdrew Claims 9, 10 and 12-18 from consideration and rejected Claims 1-8, 11 and 19-26, all remaining claims pending in the application.

The Examiner made final his restriction requirement and in response to Applicants' election with traverse of the claims of Group I, withdrew Claims 9, 10 and 12-18 from further consideration as being drawn to a non-elected invention or species.

All remaining elected claims, Claims 1-8, 11 and 19-26 were rejected under 35 U.S.C. Section 112, second paragraph, as being indefinite.

All pending claims were also rejected under 35 U.S.C. Section 102(b), or in the alternative, under 35 U.S.C. Section 103 over U.S. Pat. No. 3,901,874, issued August 26, 1975, to Hill ("Hill"), either alone or in view of stated art. The Examiner cites to European Patent Application No. 0,301,440 of Barnett, et al., published February 1, 1989 ("Barnett"); U.S. Pat. No. 4,200,661, issued April 29, 1980, to Brigand ("Brigand") and to U.S. Pat. No. 4,668,519, issued May 26, 1987, to Dartney, et al. ("Dartney") in the rejection under Sections 102(b) and 103.

Applicants' respectfully traverse each and every rejection.

AMENDMENTIn the Specification:

Please amend the specification as follows:

On page 7, line 33, please delete "Glu" from the representative structure and substitute in place thereof -- Gul --.

On page 7, line 34, please delete "Guluronic" and substitute in place thereof -- Glucuronic --.

On page 7, line 40, first occurrence, please delete "Glu-COOH = Guluronic" and substitute in place thereof -- Gul-COOH = Glucuronic --.

On page 7, line 6, both occurrences, please delete "B" and substitute in place thereof -- A --.

On page 7, line 26, before the abbreviation, XYL, first occurrence, please insert -- (1,6)-A-- --.

On page 7, line 25, before the abbreviation, GAL, please insert -- (1,2)-B-- --.

On page 12, line 8, after the word, locust, please insert the word -- bean --.

On page 25, line 23, please delete "(111)".

On page 25, line 25, please delete "(137)".

On page 25, line 27, please delete "(15-2)".

On page 25, line 29, please delete "(134-1)".

On page 25, line 32, please delete "(113)".

On page 27, line 16, please delete "(15-2)".

On page 27, line 18, please delete "(16-2)".

On page 27, line 20, please delete "(134-1)".

On page 27, line 22, please delete "(134-1)".

On page 27, line 24, please delete "(137)".

On page 27, line 26, please delete "(6698:12)".

In the Claims:

Please cancel Claims 9, 10, 12-18, 19 and 20.

Please amend the following claims:

Claim 1 (once amended) [Soluble b]Bulking agents [for use in edible formulations], comprising substantially depolymerized heteropolysaccharide(s) having an average DP of 3 to 75, which heteropolysaccharide(s) are soluble, naturally occurring, [and] have hexose backbone(s)[.], and are useful in edible formulations.

Claim 21 (once amended) [Soluble] The bulking agents of Claim 1, [for replacing up to 100% of sucrose and other soluble simple carbohydrates in edible formulations,] comprising an enzymatically depolymerized heteropolysaccharide(s) having an average DP of 3 to 75 which heteropolysaccharide(s) are derived from tamarind seed gum, galactomannan gum(s), or other naturally-occurring, substantially non-digestible heteropolysaccharide(s)[.], wherein the bulking agents are used in edible formulations containing about 0.1 to 100% sugar to replace up to 100% of the sugar.

Claim 26 (once amended) The formulation of Claim [24] 25, [further comprising] wherein the sweetener is aspartame or its salt or metal complexes, acesulfame-K, alitame, trichlorogalactosucrose, cyclamates, saccharin, fructose, neohesperidine, or mixtures thereof.

Please add the following new claims:

Claim 27. The edible formulation of Claim 23, wherein the edible formulation comprises baked goods; puddings, creams and custards; jams and jellies; confections; soft drinks and other sweetened beverages, in liquid or dry form; sauces and salad dressings; ice cream and frozen desserts; foods which are sweetened; and pharmaceuticals.

Claim 28. The edible formulation of Claim 27, wherein the formulation further comprises aspartame or its salts or metal complexes, acesulfame-K, alitame, trichlorogalactosucrose, cyclamates, saccharin, fructose, neohesperidine, or mixtures thereof.

#### REMARKS

##### Restriction Requirement

Claims to a non-elected invention (Claims 12-18) have been canceled by amendment herein. Claims to non-elected species (Claims 9 and 10) have also been canceled.

##### Section 112 Rejection

In response to the Examiner's rejection of all elected claims (Claims 1-8, 11 and 19-26) under 35 U.S.C. Section 112, second paragraph, as being indefinite, Applicants have amended Claims 1, 21 and 26, canceled Claims 19 and 20 and added new claims 27 and 28 to distinctly claim the subject matter of the invention. These amendments provide proper antecedent basis in dependent claims and clarify the subject matter of each claim.

New Claims 27 and 28 replace cancelled Claims 19 and 20. Cancelled Claims 19 and 20 were replaced to clarify the antecedent basis for the edible formulations.

Claim 1 has been amended to clarify that the original preamble limitation (for use in edible formulations) is actually a character limitation of the invention. Notwithstanding the Examiner's comments regarding a lack of distinction between Claims 1 and 5, Claim 5 presents a distinct, more narrow scope of heteropolysaccharides (a DP of 3 to 30 versus 3 to 75). The same comment applies to Claims 21 and 22.

##### Rejections Under Section 102/Section 103

It is unclear from the Examiner's comments whether the rejection is a Section 102 novelty rejection or a Section 103 obviousness rejection. Assuming that the Examiner intended two rejections, one under each section, Applicants will address each section separately.

With respect to Section 102, Claims 1-8, 11, 21 and 22-28 do not read on the claims or specification of any reference cited by the Examiner herein. Applicants' claims are directed to bulking agents having the following limiting

characteristics:

Soluble  
Substantially depolymerized (DP of 3 to 75)  
Heteropolysaccharide(s)  
Naturally-occurring AND  
Hexose backbone.

Applicants' edible formulations are limited to those comprising, as bulking agents, the following materials:

Substantially non-digestible  
Depolymerized heteropolysaccharide(s)  
Average molecular weight 500 to 50,000 AND  
The heteropolysaccharide(s) must be naturally-occurring food gum having hexose backbones.

In contrast, the Hill reference discloses guar gum which is treated to remove its "snot-like" character and, at the same time, to provide a sterilized gum having benefits in commercial use (column 9, lines 1-13). In Example 11, columns 19 and 20 of Hill, it is disclosed that the viscosity of the guar gum is "not greatly reduced" by the depolymerization treatment. Further evidence of the high viscosity of the Hill guar gum product is provided in Examples 1 and 2, columns 11 and 12 of Hill. A 10 percent starch solution gives a viscosity from 12,550 to 105,000 cps after depolymerization treatment. Hill's depolymerization treatment is limited to an acid treatment employing certain sulfonic acids in the presence of non-porous particles of silica coated with a surfactant. Hill does not teach Applicants' invention.

Likewise, the materials disclosed by Brigand are polymers of a much larger size and higher viscosity than Applicants' depolymerized heteropolysaccharides. Brigand teaches that the polymers should provide gels having a viscosity of 300-800 cps in a 1 percent aqueous solution. Brigand also teaches that the polymers maybe used at a concentration of 0.1 to 4 percent in water. Brigands' gums are used as food gelling agents, not as bulking agents. In contrast, Applicants' teach that the viscosity of a 30 percent solution of the depolymerized heteropolysaccharides should not exceed 50 cps. See page 15, lines 20-21.

The Dartney reference discloses reduced calorie cookies comprising water-soluble polydextrose and a cellulosic bulking agent. In the preferred embodiment, the bulking agent is microcrystalline cellulose. Neither polydextrose nor cellulose is a heteropolysaccharide and the Dartney invention does not read on Applicants' invention.

The Barnett reference discloses water soluble bulking agents comprising modified and unmodified hemicelluloses. Hemicelluloses are not heteropolysaccharides. The Barnett bulking agents are prepared from nonwoody lignocellulosic substrates such as corn bran, alfalfa, hay, and the like. These materials all have pentose, not hexose, polymer backbones. Thus, Applicants' invention does not read on the Barnett reference.

As for the Section 103 rejection, none of the references, either alone or taken together, suggest Applicants' invention. Applicants' selection of a hexose backbone polymer for depolymerization provides the limited scope of food gums

which may be used as a substrate for production of the heteropolysaccharide bulking agent. The food gums substrate is desirable because food gums have a proven record of safety in foods for human consumption and provide functional characteristics in the depolymerized form which have beneficial properties. For example, the grittiness and residual mouthfeel of the cellulosic bulking agents are undesirable. These properties are absent from the bulking agents derived from food gums. Furthermore, Applicants' invention is limited to heteropolysaccharides having a DP of 3 to 75 because these materials are substantially non-digestible. In contrast, mono- or disaccharides or food grade homopolysaccharides such as starch, glucan and some celluloses, upon depolymerization, are substantially digestible and provide caloric content to foods.

As can be seen in the data present in Table III and Table IV and Example 12, pages 24-28, the molecular size and weight of the bulking agents and the amount of depolymerization are critical limitations to the utility of the bulking agents as functional replacements for sugar in foods. For example, Table III shows that depolymerized guar gum having a viscosity in a 30 percent solution of 2,500 cps yields a cake with unacceptable quality. The same guar gum sample also contained 15.9 percent, by weight, of fragments having a weight average molecular weight of more than 10,000. Similar results are shown for depolymerized guar gum used to make puddings. None of the references disclose this relationship between molecular size and weight distribution and functionality of the bulking agent.

The same comment applies to the selection of substrates for depolymerization. Applicants' selection of certain food gums for their functional characteristics is not suggested by disclosures in the art. For example, as noted earlier, Hill teaches a light depolymerization process so as to improve the functional characteristics of the food gums as gums. Hill does not suggest the use of depolymerized gums as bulking agents.

#### CONCLUSIONS

For the reasons set forth above, Applicants respectfully request that the rejections under Sections 112, 102 and 103 be withdrawn and that an early allowance of Claims 1-8, 11 and 21-28 be granted.

Respectfully submitted,

*Mary E. Porter*

Mary E. Porter, Reg. No. 33,440  
Attorney for Applicants  
Tel. No. 908-685-5127

National Starch and Chemical Company  
P. O. Box 6500  
Bridgewater, New Jersey 08807

May 30, 1991

I HEREBY CERTIFY THAT THIS CORRESPONDENCE IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE AS FIRST CLASS MAIL IN AN ENVELOPE ADDRESSED TO: COMMISSIONER OF PATENTS AND TRADEMARKS, WASHINGTON, D. C. 20231, ON <u>May 30, 1991</u> BY <u>Mary E. Porter</u>
--

**EXHIBIT E**

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MEP



**UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
07/525,943	05/17/90	CHIU	C 1358

EXAMINER  
GOLIAN, J

EDWIN M. SZALA  
NATIONAL STARCH AND CHEMICAL CO.  
BOX 6500  
BRIDGEWATER, NJ 08807

ART UNIT PAPER NUMBER  
132

DATE MAILED: 09/04/91

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

☐ This application has been examined ☒ Responsive to communication filed on 4/19/91  
6/3/91 ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), 0 days from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

**Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:**

- |   |   |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited by Examiner, PTO-892.        | 2. <input type="checkbox"/> Notice re Patent Drawing, PTO-948.                  |
| 3. <input checked="" type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449.  | 4. <input type="checkbox"/> Notice of Informal Patent Application, Form PTO-152 |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474. | 6. <input type="checkbox"/>   |

**Part II SUMMARY OF ACTION**

1. ☒ Claims 1-8, 11, 21-28 are pending in the application.

Of the above, claims \_\_\_\_\_ are withdrawn from consideration.

2. ☒ Claims 9, 10, 12-18, 19, 20 have been cancelled.

3. ☐ Claims \_\_\_\_\_ are allowed.

4. ☒ Claims 1-8, 11, 21-28 are rejected.

5. ☐ Claims \_\_\_\_\_ are objected to.

6. ☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on \_\_\_\_\_. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on \_\_\_\_\_, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed \_\_\_\_\_, has been ☐ approved; ☐ disapproved (see explanation).

12. ☐ Acknowledgement is made of the claim for priority under U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. \_\_\_\_\_; filed on \_\_\_\_\_.

13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

RECEIVED  
SEP 04 1991  
PATENT EXAMINER

The change of inventorship adding Roger Jeffcoat has not been approved. The declaration states that the contribution of the inventor sought to be added is directed to claims 12-18. No such claims or comparable claims are at present in this application.

References have been canceled from Applicants' submitted Form-1449. The AM and AN references are not prior art teachings.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject

---

matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 1-8, 11 and 21-28 are rejected under 35 U.S.C.

§ 102(e) as anticipated by or, in the alternative, under 35 U.S.C. § 103 as obvious over Tomita et al.

Tomita et al disclose hydrolyzed konnyaku (konjak) having an average molecular weight of 2,000 to 15,000. It is not seen that the claims define a patentable new product. The associations claims to in some of the claims, e.g. claim 25, are not seen to be patentably significant. Patentees show food and beverage associations. Dietary sweeteners are commonly associated with foods and the limitation of some of the claims are not seen to patentably distinguish over the conventional use of such sweeteners. In other words, the use of dietary sweeteners in the food and beverage environments of the applied reference would be prima facie obvious.

Claims 1-8, 11, 21 and 22 are rejected under 35 U.S.C. § 102

(a) as being anticipated by Schnepf et al (PCT/EP89/01207).

It is not seen how the instant claims distinguish over the enzymatic hydrolyzed heteropolysaccharides of the reference. That "Schnepf does not disclose the use of decomposed heteropolysaccharides in foods" is not considered particularly relevant to the claims.

Claims 1-8, 11 and 21-28, all the claims in the case, are rejected under 35 U.S.C. § 102(a) as anticipated by or, in the alternative, under 35 U.S.C. § 103 as obvious over Kemaris et al (WO 89/02900).

Kemaris et al, as pointed out by Applicants, discloses materials of the type claimed, as thickening agents. It is not seen that the claims define patentably over that which is taught by the reference. The combinations claimed in some of the claims are not seen to be patentably significant. Thickening agents are commonly used with foods and dietary sweetener combinations. To use the thickener of the reference in the combinations claimed in some of the claims would have only involved the ordinary skill of one in the art.

Claims 1-8, 11 and 21-28, all the claims in the case, are rejected under 35 U.S.C. § 103 as being unpatentable over Hill in view of the admitted state of the art (Barnett et al) for the

reasons advanced in the last office action in rejecting the claims. The new claims and the amendment to the claims are not seen to influence the conclusion of unpatentability previously set forth.

Applicant's arguments filed June 3, 1991 have been fully considered but they are not deemed to be persuasive.

While Applicants acknowledge that the rejections advanced includes the rejection on the combination of the teachings of the art, the thrust of the argument is based on patentability over each reference per se. Arguments which do not address the rejection as applied are not pertinent.

While Applicants description of Hill is factually correct, Applicants overlook the specific teachings specifically referred to. Attention is again directed to col. 9, first complete paragraph where the reference teaches "after at least partial depolymerization and/or hydrolyses". The reference is more broadly directed to hydrolysis than specifically addressed by Applicants.

Applicants arguments directed to Barnett are not particularly relevant since the argument ignores that Barnett was applied in combination. The applied Hill teaches hydrolysis broadly of a generic family of carbohydrates including the

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materials of Barnett et al. Barnett et al teach depolymerization to the extent claimed and to hydrolyze the products of Hill to the extent of Barnett would have only involved the ordinary skill of one in the art.

Applicants arguments directed to the art applied and cited are tangential and do not address the specific pertinency of the art relied upon and cited to further show the state of the art. Darbey again and in fact discloses that hydrocolloids as functionally effective as bulking agents which Applicants choose to disregard. See again col. 15, first complete paragraph.

All of Applicants' arguments have been considered. None of them are convincing of patentability.

No claim is allowed.

Any inquiry concerning this communication should be directed to Joseph Golian at telephone number (703) 308-3830.

Joseph Golian/om  
August 27, 1991  
August 30, 1991

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ART UNIT 132